WHAT IS CLAIMED:

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A multi-layer rigid container for food or beverage packaging comprising at least an inner layer, an outer layer and a core layer between the inner layer and the outer layer, wherein the inner and outer layers are comprised of an aromatic polyesters or copolyesters, and wherein the core layer is comprised of an oxygen scavenging composition comprising (a) a polymer backbone; (b) cyclic olefinic pendent groups covalently linked to the polymer backbone; and (c) a transition metal catalyst.

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2. The rigid container of claim 1, wherein the inner layer and the outer layer comprise aromatic polyesters or copolyesters selected from the group consisting of polyethylene terephthalate, polyethylene naphthalate, polypropylene terephthalate, polybutylene terephthalate, polyethylene isophthalate, polycyclohexanedimethanol terephthalate, polybutylene naphthalate and polycyclohexanedimethanol naphthalate, and copolymers and blends thereof.

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3. The rigid container of claim 1, wherein the polymer backbone is ethylenic and the cyclic olefinic pendant groups are linked to the polymer backbone by linking groups selected from the group consisting of:

$$-O-(CHR)_n-$$
; $-(C=\emptyset)-O-(CHR)_n-$; $-NH-(CHR)_n-$; $-O-(C=O)-(CHR)_n-$;

-(C=O)-NH-(-C \not HR)_n-; and -(C=O)-O-CHOH-CH₂-O-;

wherein R is hydrogen or an alkyl group selected from the group consisting of methyl, ethyl, propyl and butyl groups and where n is an integer in the range from 1 to 12.

4. The rigid container of claim 1, wherein the cyclic olefinic pendent groups have the structure (II):

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$$q_1 \xrightarrow{q_2} m$$

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where q₁, q₂, q₃, q₄, and r are selected from the group consisting of -H, -CH₃, and -C₂H₅; and where m is –(CH₂)_n- with n being an integer in the range from 0 to 4; and wherein, when r is –H, at least one of $q_{1/2}$, q_{2} , q_{3} and q_{4} is –H.

5. The rigid container of claim 3, wherein the polymeric backbone, linking groups and cyclic olefinic pendent groups comprise repeating units, each unit having a structure (III) as follows:

(III)

$$q_3$$
 q_4
 q_2
 q_3
 q_4
 q_5
 q_7
 q_8
 q_8
 q_8
 q_9
 q_9
 q_9

wherein P+T+ Q is 100 mol % of the total composition; P is greater than 0 mol % of the total composition; Z is selected from the group consisting of an aryl group; $-(C=Q)OR_1$; $-O(C=O)R_1$; and an alkyl aryl group, structure (IV):

(IV)

where R_4 j/s selected from the group consisting of $-CH_3$, $-C_2H_5$, and -H; R_1 is 25 selected/from the group consisting of -H, -CH₃, -C₂H₅, -C₃H₇ and -C₄H₉; R₂ and R₃ are selected from the group consisting of -H and -CH₃; X is selected from the group consisting of -O-, -NH-, -(C=O)O-, -(C=O)NH-, -(C=O)S-, -O(C=O)and $\frac{1}{2}(CHR)_{\lambda^{-}}$; λ is an integer in the range from 1 to 6; Y is -(CHR)_n-, where n 30 is an integer in the range from 0 to 12, R being selected from the group

consisting of –H, -CH₃ and -C₂H₅; where q_1 , q_2 , q_3 , q_4 , and r are selected from the group consisting of -H, -CH₃, and -C₂H₅, and where m is -(CH₂)_n- and where n is an integer in the range from 0 to 4; and wherein when r is –H, at least one of q_1 , q_2 , q_3 and q_4 is –H.

The rigid container of claim 1/2, wherein the cyclic olefinic pendent group

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is selected from the group consisting of cyclohexene-4-methylene radical, 1-methyl cyclohexene-4-methylene radical, 2-methyl cyclohexene-4-methylene radical, 1,2-dimethyl cyclohexene-4-methylene radical, 1,5-dimethyl cyclohexene-4-methylene radical, 1,5-dimethyl cyclohexene-4-methylene radical, 2,5-dimethyl cyclohexene-4-methylene radical, 1,2,5-trimethyl cyclohexene-4-methylene radical, cyclohexene-4-ethylene radical, 1-methyl cyclohexene-4-ethylene radical, 2-methyl cyclohexene-4-ethylene radical, 5-methyl cyclohexene-4-ethylene radical, 1,2-dimethyl cyclohexene-4-ethylene radical, 2,5-dimethyl cyclohexene-4-ethylene radical, 2,5-dimethyl cyclohexene-4-ethylene radical, 2,5-dimethyl cyclohexene-4-propylene radical, 5-methyl cyclohexene-4-propylene radical, 5-methyl cyclohexene-4-propylene radical, 1,2-dimethyl cyclohexene-4-propylene radical, 1,5-dimethyl cyclohexene-4-propylene radical, 1,5-dimethyl cyclohexene-4-propylene radical, 1,5-dimethyl cyclohexene-4-propylene radical, 1,5-dimethyl cyclohexene-4-propylene radical, 1,5-dimethyl

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7. The rigid container of claim 1, wherein the oxygen scavenging composition is selected from the group consisting of a ethylene/methyl acrylate/cyclohexenyl methyl acrylate terpolymer, a cyclohexenyl methyl acrylate/ethylene copolymer, a cyclohexenyl methyl acrylate homopolymer and a methyl acrylate/cyclohexenyl methyl acrylate copolymer.

cyclohexene, 4-propylene radical, 2,5-dimethyl cyclohexene-4-propylene

radical, and 1,2,5-trimethyl cyclohexene-4-propylene radical.

- 8. The rigid container of claim 1, wherein the outer layer comprises polyethylene terephthalate, polyethylene naphthalate, or a mixture of polyethylene terephthalate and polyethylene naphthalate.
- 5 9. The rigid container of claim 1, wherein the composition further comprises a first tie layer between the core layer and the inner layer, and a second tie layer between the core layer and the outer layer.
- 10. The rigid container of claim 1, wherein the transition metal catalyst is 10 a metal salt.
 - 11. The rigid container of claim 10, wherein the metal in the metal salt is cobalt.
 - 12. The rigid container of claim 11, wherein the metal salt is selected from the group consisting of cobalt neodecanoate, cobalt 2-ethylhexanoate, cobalt oleate, and cobalt stearate.
- The rigid container of claim 1, wherein the oxygen scavenging
 composition further comprises at least one triggering material to enhance initiation of oxygen scavenging.
 - 14. The rigid container of claim 13, wherein the triggering material is a photoinitiator.
 - 15. The rigid container of claim 14, wherein the photoinitiator has an ultraviolet absorption window above 320 nm.
- 16. The rigid container of claim 1, wherein the rigid container is suitable for packaging oxygen sensitive drinks for extended freshness and shelf life.

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17. The rigid container of claim 16, wherein the oxygen sensitive drink is beer, wine, or fruit juice.